Riverside Unit
Fire Management Plan
2005

California Department of Forestry and Fire Protection
Riverside Unit
Craig E. Anthony, Unit Chief

Approved by:

Craig E. Anthony, Unit Chief

Community Wildfire Protection Plan Content Agreements

California Department of Forestry and Fire Protection
- Chief Craig E. Anthony

Riverside County Fire Department
- Chief Craig E. Anthony

Riverside County Board of Supervisors:
- District 1 - Bob Buster
- District 2 - John Tavaglione
- District 3 - Jeff Stone
- District 4 - Roy Wilson
- District 5 - Marion Ashley

Idyllwild Fire Protection District

Mountain Communities Fire Safe Council
- Idyllwild Chapter
- Pine Cove Chapter
- Pinyon Chapter
- Poppet Flats/Twin Pines Chapter (Coming Soon)

Southwest Riverside County Fire Safe Council

United States Department of Agriculture, United States Forest Service
- Cleveland National Forest
- San Bernardino National Forest

California Department of Parks and Recreation
- Mount San Jacinto State Park
- Lake Perris State Park
- Anza-Borrego State Park

Bureau of Land Management

Executive Summary

The 2005 Riverside Unit Pre-Fire Management Plan reflects the current State of Emergency that exists in the San Jacinto Mountains (Battalion 11) within the Unit. Personnel from the Pre-Fire Management Division, including the Unit Chief, Deputy Chief – Special Operations, Pre-Fire Division Chief, Battalion Chiefs, Pre-Fire Engineer, unit Foresters, VMP Co-Coordinator, and Riverside County Fire Department Pre-Fire Management personnel and, are working diligently with the Mountain Area Safety Task Force (MAST) to come up with solutions for this massive problem. Although Pre-Fire activities continue in other parts of the county through the shifting of resources, the focus of our activities has been and must continue to be these communities and watersheds within the mountainous area until the unprecedented threat can be sufficiently mitigated.

Plan Concept and Process

The State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection (CDF) have drafted a comprehensive update of the Fire Plan for wildland fire protection in California. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis.

Goals and Objectives

The overall goal of the Pre-Fire Management Plan is to reduce total government costs and citizen losses from wildland fire in the Riverside Unit by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. The Fire Plan has five strategic objectives:

- Create wildfire protection zones that reduce the risks to citizens and firefighters.
- Include all wildland, not just the state responsibility areas. Analysis will ultimately include all wildland fire service providers - federal, state, local government, and private. This is the long-term strategy. This plan is primarily focused on the CDF Direct Protection Area (DPA) of the Riverside Unit, however the current extreme fuel conditions existing in the San Jacinto Mountains require the Unit to include the State Responsibility Area (SRA) within U.S. Forest Service DPA also.
- Identify and analyze key policy issues and develop recommendations for changes in public policy. Analysis will include alternatives to reduce total costs and/or increase fire protection system effectiveness.

- Describe the wildland fire protection system in fiscal terms. This can include all public/private expenditures and potential economic losses.
- Translate the analysis into public policy.

Fire Plan Framework

The five major objectives form the basis of an ongoing fire planning process to monitor and assess Riverside County's wildland fire environment. They include:

- Wildfire Protection Zones. These zones are buffers around the community to reduce citizen and firefighter risks from costly and damaging fires.
- Initial Attack Success. This measure can be used to assess the department's ability to provide an equal level of protection to lands of similar type, as required by Public Resources Code 4130. This measurement is the percentage of fires that are successfully controlled before unacceptable costs are incurred.
- Assets Protected. The assets addressed in the plan are citizen and firefighter safety, watersheds and water, timber, wildlife and habitat (including rare and endangered species), unique areas (scenic, cultural, and historic), recreation, range, structures, and air quality.
- Pre-fire Management. This is the process that assesses alternatives to protect assets from unacceptable risk of wildland fire damage. Project alternatives may include a combination of fuels reduction, ignition management, fire-safe engineering activities, and forest health improvement to protect public and private assets.
- Fiscal framework. This is a tool for assessing and monitoring the cost-effectiveness of the wildland fire protection systems.

Pre-Fire Management Plan Applications

- Identify those areas of concentrated assets and high risk for state, federal, and local officials and for the public
- Allow wildland fire service providers to create a more efficient fire protection system focusing on meaningful solutions for identified problem areas.
- Give citizens an opportunity to identify public and private assets to design and carry out projects to protect those assets.
- Identify, before fires start, where cost-effective pre-fire management investments can be made to reduce taxpayer costs and citizen losses from wildfire.
- Encourage an integrated intergovernmental approach to reducing costs and losses.
- Enable policy makers and the public to focus on what can be done to reduce future costs and losses from wildfires.

Assessment Framework

The Pre-Fire Management Plan includes a framework for a systematic assessment of the existing levels of wildland protection services, identifies high-risk and high-value areas that are potential locations of costly and disastrous wild fires, ranks the areas in terms of priority needs, and prescribes what can be done to reduce the future costs and losses. This assessment system has four major components:

- Level of Service
- Assets at Risk
- Hazardous Fuels
- Severe Fire Weather

During the data collection and validation phase, input is solicited and invited from interested stakeholders as it pertains to assets at risk. Stakeholders may be other government agencies, private landowners, service groups, or homeowner associations. It is an objective of the Pre-Fire Management Plan that those who benefit from the protection of an asset should also share in costs for protecting that asset. Thus, asset stakeholders are encouraged to provide financial support for the projects that provide significant benefits to their assets at risk.

Collaboration

Mountain Area Safety Task Force (MAST)

The California Department of Forestry and Fire Protection (CDF), in cooperation with all of the agencies and individuals in the Riverside County MAST, have teamed up to mitigate an unprecedented emergency facing the forested mountain communities. Four years of severe drought combined with drastically overstocked tree stands have resulted in tremendous rates of tree mortality due to bark beetles in and around the community. In March 2002, the Riverside County Board of Supervisors declared a local emergency. In March 2003, Governor Davis concurred with the County and issued his own State of Emergency Proclamation. The governor has made a request to President Bush for a federal declaration.

The MAST was formed to mitigate the threat to life, property, watershed and the ecosystem. It is currently Riverside Unit's single greatest threat to SRA, (even though it is within federal DPA) and is the number one priority of the Riverside Unit. This is not only for the protection of life, property and resources, but to protect the lives of CDF and other agency firefighters and law enforcement personnel that may be called to fight a fire or conduct large-scale evacuations in communities within the San Jacinto Mountains.

In addition to CDF, the MAST consists of members from many agencies, groups and elected officials: Mountain Communities Fire Safe Council; U.S. Forest Service; Riverside County Fire Department; Natural Resource Conservation Service; Idyllwild Fire Protection District; Riverside County Board of Supervisors; Riverside County Office of Emergency Services; State OES; Riverside County Flood Control; Southern California Edison; Senator Feinstein; Congresswoman Bono; Senator Battin; Assemblyman Benoit; California Department of Fish and Game; California Department of Transportation; Riverside County Transportation Land Management Agency; South Coast Air Quality Management District; Pine Cove/Idyllwild/Fern Valley/Lake Hemet Water Districts; Riverside County Waste Management; Pine Cove Property Owners Association; UC Co-op Extension Service; Riverside County Sheriffs Office; California Highway Patrol. The MAST is organized using the Incident Command System (ICS) with a unified command; formal Incident Action Plans (IAPs) are produced and followed by the MAST members.

The MAST ICs have set the following incident objectives:

- Provide for Public and Employee Safety
- Clear transportation and utility corridors of dead trees
- Protect Communications Systems
- Protect the community from catastrophic fire and tree falling hazards
- Develop and implement the following plans:
    - Immediate – Evacuation, structure contingency, transportation and utility corridors, communication sites, damage assessment and dead tree removal.
    - Mid-term – Transition to long-term community protection, regeneration and forest health.
    - Long-term - Strategic actions leading to continued forest health and community safety
- Provide for coordinated Public Relations Program with the public, elected officials and within agencies
- Provide for coordinated agency responses
- Maintain emergency response capability including structure protection contingency
- Prioritize and maintain transportation and utility corridors and communication sites
- Prioritize community protection through Defensible Fuel Profile Zones, hazard tree abatement, fuelbreaks and fire law/code enforcement
- Provide for removal of trees and slash through solid waste management and development of private sector utilization and markets
- Provide cost/benefit analysis of actions based upon objectives
- Identify and develop financial aid opportunities through grants and incentives.

Specific MAST Division Assignments for CDF Personnel

- Remove dead/dying trees that threaten to block vital evacuation corridors using conservation camp crews working in partnership with CalTrans and county road department. Assignment is ongoing daily
- Develop a structure protection pre-plan for all mountain communities. Assignment was completed August 8, 2003 for Pine Cove, Idyllwild, Mountain Center
- Identify and construct safety zones for use by firefighting/law enforcement resources, which can be also used as a “shelter in place” option for members of the public, should there not be sufficient time to evacuate. To date six safety zones have been identified and completed. The safety zones are – Tahquitz Pines, Idyllwild Pines, Buckhorn Camp, AstroCamp, International School Of Music and the Arts (ISOMATA), and the Idyllwild Transfer Station.
- Assist private property owners with identifying dead/dying trees that must be removed due to fire and falling hazards – work with FEMA, OES, the County

and other agencies to help secure funding to assist property owners with the extreme and unexpected costs of removing trees around their structures. As of May 1, 2005, over $28,254,000 has been obtained for the County of Riverside, through FEMA, USFS, NRCS and other federal grants to assist with dead tree removal and fuels treatment on private SRA lands.

- Create Defensible Fuel Profile Zones (DFPZ) around the communities on both public and private lands in order to have sufficient defensible space to keep a wildfire from entering or leaving the community – accelerate work on Red Hill VMP shaded fuelbreak and add additional land under contract – Initiate work on the Baldy Mountain VMP project to protect the communities of Mountain Center and Baldy Mountain Village. Augmentation camp crews are working on DFPZs
- Assist the Mountain Communities Fire Safe Council in securing grants for fuel reduction projects in the communities – provide technical assistance on setting up and administering projects. This is an on-going project.
- Develop a community evacuation plan in cooperation with the other fire and law enforcement agencies. Project was completed primarily by CDF personnel August 8, 2003
- Work with utility companies to ensure dead/dying trees are felled and removed that threaten to fall on lines and start fires or interrupt service. Identify communication sites that need tree removal in order for them to be protected and available in the event of fire or other type incident. SCE has completed their first and second passes through the San Jacinto Mountains and surrounding communities. SCE is currently working on “maintenance” type removals, removing new mortality as it is located.
- Enforce the Public Resources Code and other applicable fire codes/ordinances on all properties within the community to reduce fuel loading. Develop educational materials to assist the property owners in knowing what exactly is required. Pre-Fire Staff have been hosting various meetings with agencies and the public to ensure equal enforcement and education in the communities. Station personnel are gearing up to begin LE-38 inspections in their areas, with additional follow-up by Fire Prevention staff to issue citations as appropriate.
- Develop a reforestation and forest health management plan that will keep fuels at acceptable levels and ensure forest health. Through Forest Health Grants, two Forestry Assistant II’s and an office tech have been hired to begin working on forest rehabilitation and forest health issues.
- Develop a comprehensive strategy for disposing of the enormous amount of fuels being generated by the felling of dead/dying trees. CDF personnel, working in cooperation with Riverside County Waste Management and the USFS have set up a tub grinding operation capable of grinding up to 40” diameter logs and all the associated slash into wood chips. The wood chips are going to a wood-burning electrical generation plant and/or to a company that produces mulch for the public market.
- Work with the USFS, University of California and other agencies to develop markets to take advantage of the massive volume of logs and biomass that

are resulting from the tree die-off and subsequent removal. A $2,000,000 grant has been received to promote wood utilization in the San Jacinto Mountains.

- Work with other MAST agencies and Environmental Systems Research Institute (ESRI) to develop a shared GIS database for use by all MAST agencies in conjunction with public access of select portions of that GIS along with other educational information on the emergency via a public website, www.calmast.org. The initial database and website are complete as of August 28, 2003. Numerous upgrades and additions will be constantly occurring.

This Incident Action Plan for this emergency is constantly evolving. It is estimated that it will take at least 5 years of a constant massive effort to remove the vast amount of hazardous fuels currently existing in the San Jacinto Mountains.

MAST Accomplishments as of December 2004

- All 6,477 parcels received some level of survey for dead trees
- County Contracts resulted in removal of 3,905 trees on 779 parcels
- County Contracts resulted in removal of 1,509 trees on the six Safety Zones
- SCE removed 18,100 trees
- NRCS removed 3,779 trees with five contracts
- Total of approximately 27,293 trees removed
- Fire Safe Council completed hazard abatement on 200 private parcels
- 3,850 hours spent by 32 visiting Foresters assisting RRU/RVC during this emergency
- Evacuation Table Top Exercise Conducted June 24, 2004
- I-Zone Drill scheduled for June 15, 2005 – Will include all the agencies affiliated with MAST working in the field.

Government Stakeholders

An integrated, intergovernmental approach is used to assess all wildlands. Federal, state and local wildland fire and resource protection agency partners in planning are:

- United States Department of Agriculture
  - Forest Service
    - San Bernardino National Forest, San Jacinto Ranger District
    - Cleveland National Forest
  - Natural Resource Conservation Service

- United States Department of Interior
  - Bureau of Land Management
  - Fish and Wildlife Service

- State of California
  - Department of Forestry and Fire Protection
  - Department of Fish and Game
  - Department of Parks and Recreation
  - Department of Transportation

- Riverside County
  - Riverside County Fire Department
  - Transportation and Land Management Agency
  - Riverside County Parks and Recreation

- The Following Cities:
  - Banning
  - Beaumont
  - Calimesa
  - Canyon Lake
  - Corona
  - Desert Hot Springs
  - Hemet
  - Lake Elsinore
  - La Quinta
  - Moreno Valley
  - Murrieta
  - Norco
  - Palm Springs
  - Palm Desert
  - Perris
  - Riverside
  - San Jacinto
  - Temecula

Private and Quasi-Public Stakeholders

- Private individuals / property owners.
- Ranchers and farmers utilizing open lands.
- Corporate entities holding lands or conducting business in areas at risk.
- Home and property owners associations.
- Real Estate and Business Associations.
- Coordinated Resource Management Planning Committees (CRMP).
- Firesafe Councils and Alliances.
- Water companies relying on watershed areas.
- Electric companies concerned with power generation and distribution.
- Railroads and other transportation entities traversing wildlands.
- Communication companies with facilities sited on or traversing wildlands.
- Agricultural commissions, boards, committees and associations.
- Habitat conservation groups.
- Groups and associations promoting various outdoor activities.
- Historical societies.
- Tourism and commerce promoting groups.
- Petroleum/Natural Gas pipeline companies

Assets at Risk

The primary goal of fire protection in California is to safeguard the wide range of assets found across wildland areas. These assets include life and safety, structures, range, recreation, hydroelectric power, watersheds, soil, water storage, water supply, scenic value, timber, air quality, historic buildings, non-game wildlife, game wildlife, and infrastructure.

ASSET AT RISK	PUBLIC ISSUE CATEGORY	LOCATION AND RANKING METHODOLOGY
HYDROELECTRIC POWER	PUBLIC WELFARE	1.) WATERSHEDS THAT FEED RUN OF THE RIVER POWER PLANTS, RANKED BASED ON PLANT CAPACITY; 2.) CELLS ADJACENT TO RESERVOIR BASED PLANTS (LOW RANK); AND 3.) CELLS CONTAINING CANALS AND FLUMES (HIGH RANK)
FIRE FLOOD WATERSHEDS	PUBLIC SAFETY PUBLIC WELFARE	WATERSHEDS WITH A HISTORY OF PROBLEMS OR PROPER CONDITIONS FOR FUTURE PROBLEMS. RANKS ARE BASED ON AFFECTED DOWNSTREAM POPULATION
SOIL	ENVIRONMENT	WATERSHED RANKED BASED ON EROSION POTENTIAL
WATER STORAGE	PUBLIC WELFARE	WATERSHED AREA UP TO 20 MILES UPSTREAM FROM WATER STORAGE FACILITY, RANKED BASED ON WATER VALUE AND DEAD STORAGE CAPACITY OF FACILITY
WATER SUPPLY	PUBLIC HEALTH	1.) WATERSHED AREA UP TO 20 MILES FROM WATER SUPPLY FACILITY (HIGH RANK); 2.) GRID CELLS CONTAINING DOMESTIC WATER DIVERSIONS, RANKED BASED ON NUMBER OF CONNECTIONS, AND 3.) CELLS CONTAINING DITCHES THAT CONTRIBUTE TO THE WATER SUPPLY SYSTEMS (HIGH RANK)
SCENIC VALUE	PUBLIC WELFARE	FOUR MILE VIEWSHED AROUND SCENIC HIGHWAYS AND ¼ MILE VIEWSHED AROUND WILD AND SCENIC RIVERS, RANKED BASED ON POTENTIAL IMPACTS TO VEGETATION TYPES (TREE VERSUS NON-TREE TYPES)
TIMBER	PUBLIC WELFARE	TIMBERLANDS RANKED BASED ON POTENTIAL DAMAGE BY FOREST INVENTORY AND ANALYSIS (FIA) REGION AND OWNERS.
RANGE	PUBLIC WELFARE	RANGELANDS RANKED BASED ON POTENTIAL REPLACEMENT FEED COST BY REGION/OWNER/VEGETATION TYPE
AIR QUALITY	PUBLIC HEALTH ENVIRONMENTAL PUBLIC WELFARE	POTENTIAL DAMAGES TO HEALTH, MATERIALS, VEGETATION, AND VISIBILITY; RANKING BASED ON VEGETATION TYPE AND AIR BASIN
HISTORIC BUILDING	PUBLIC WELFARE	FROM STATE OFFICE OF HISTORIC PRESERVATION, RANKED BASED ON FIRE SUSCEPTIBILITY
RECREATION	PUBLIC WELFARE	UNIQUE RECREATION AREAS OR AREAS WITH POTENTIAL DAMAGE TO FACILITIES, RANKED BASED ON FIRE SUSCEPTIBILITY
STRUCTURES	PUBLIC SAFETY PUBLIC WELFARE	RANKING BASED ON HOUSING DENSITY AND FIRE SUSCEPTIBILITY
NON-GAME WILDLIFE	ENVIRONMENTAL PUBLIC WELFARE	CRITICAL HABITATS AND SPECIES LOCATIONS BASED ON INPUT FROM THE CALIFORNIA DEPARTMENT OF FISH AND GAME AND OTHER STAKEHOLDERS
GAME WILDLIFE	PUBLIC WELFARE ENVIRONMENT	CRITICAL HABITATS AND SPECIES LOCATIONS BASED ON INPUT FROM THE CALIFORNIA DEPARTMENT OF FISH AND GAME AND OTHER STAKEHOLDERS
INFRASTRUCTURE	PUBLIC SAFETY PUBLIC WELFARE	INFRASTRUCTURE FOR DELIVERY OF EMERGENCY AND OTHER CRITICAL SERVICES (E.G. REPEATER SITES, TRANSMISSION LINES)

A closer look at a specific asset at risk in Riverside County, wildlife habitat, reveals the complexity involved with assessing and managing for these assets. Riverside County is home to numerous endangered plant and animal species, all of which are affected by fire in some manner. Endangered species play a critical role in the ecosystem and must be factored into the equation when ranking assets. Managing for these species and their habitat is often in direct conflict with the management of other assets such as the protection of lives and property. The attached asset rankings map displays how these assets are ranked within the county.

Water quality has proven to be another example of a critical asset within Riverside County. Water stored in reservoirs within the county is supplied to businesses and residences throughout the Los Angeles Basin as well as the Inland Empire. Maintenance of water quality is crucial to Riverside County's 1.5 million residents and the support of its largest business, agriculture. Public consumption, recreation, and hydro-electricity are all affected by the quality of water. There are 8 reservoirs within the county that supply water for drinking, recreation, or hydro-electricity. They are: Lake Perris, Lake Mathews, Vail Reservoir, Lake Hemet, Canyon Lake, Lake Elsinore, Lake Skinner and Diamond Valley Lake.

The following is a summary of the assets at risk, by Battalion for Riverside Unit. The information primarily is in consideration to the potential for large and damaging wildland fires, and the potential for a significant amount of structures damaged.

Battalion 1 – Perris

Significant damage would most likely be seen in the east side of the Perris Valley between Station 3 (Nuview) and Station 54 (Homeland), as there are some high dollar homes in the area. The potential for large and damaging fires, in the potential amount of structures lost, is more of a problem in the Good Meadow area. This is due to the large amount of mobile homes and scattered single-family dwellings in the Good Meadow area. The mobile homes, coupled with scattered structures presents a significant exposure problem in the event of a fast moving grass fires.

Battalion 2 – Lake Elsinore

The primary assts at risk in Battalion 2 are lives and residential structures. A secondary concern is the potential damage that could occur if a severe winter followed a large fire in the Trabuco area of the Ortega Mountains. This area has suffered two major fires in recent history, the 1988 Ortega Fire which burned 16,000 acres from Orange County into the Lake Elsinore area, and the Decker Canyon Fire on August 8, 1959 which claimed the lives of five fire fighters. The area is also under coastal influences, combined with Lake Elsinore, which create "sundowner" winds, significant down canyon winds in the afternoon.

Battalion 3 – Beaumont

The assets at risk within Battalion 3 are predominately residential and recreational. The primary recreational assets are located in Poppet Flats, and Bogart Park in Cherry Valley. One of the areas at risk is the Morongo Indian Reservation. In this

area, there is poor hazard reduction compliance, arson issues, and high amounts of off-road vehicle use. Additionally, due to the severe 2004/2005 winter many of the fire roads in the area sustained damage. These roads in include the International Truck Trail, Mile-High Truck Trail, and the Cherry Truck Trail. Pending the completion of maintenance on these critical access Truck Trails, fires in these areas can be expected to burn through multiple burning periods.

Battalion 4 – Corona

The major assets at risk from a Santa Ana River bottom fire are the structures that line the bluffs overlooking the river, which would be susceptible to a fire coming out of the river bottom, and potential wildlife habitat. There is a problem gaining access to a good portion of the river bottom.

A small portion of the Chino Hills is located along the west end of the County line and on a normal fire day we are able to contain a fire there to 100 acres or less. When there is a Santa Ana wind event, a fire has the potential to run into Orange County rapidly and threaten hundreds of homes in the Yorba Linda/Carbon Canyon areas. The Chino Hills State Park covers just over 13,000 acres of the Chino Hills and holds recreational values and wildlife habitat.

The Dawson Canyon and Spanish Hills areas consist of the hills south of Home Gardens running east to Lake Hills and running south basically along the east side of I-15 to Lake Street. The assets at risk generally consist of the approximately 35 homes located in the two areas.

The assets at risk in the foothills that run along the Cleveland National Forest (Trabuco Ranger District) from the Orange County line to the Battalion 2/4 dividing line consist of the numerous housing developments that adjoin the wildland and the numerous houses built in some of the canyons and hillsides.

Battalion 5 – San Jacinto

The major assets at risk within Battalion 5 are the residential areas of the San Jacinto Valley, and the community of Sage, located near Station 28. The biggest risk currently facing Battalion 5 is the west-facing slope below the communities of Idyllwild and Pine Cove. A repeat of the 1974 Soboba Fire is now possible due to fuel conditions. Also at risk in Battalion 5 are the foothills surrounding Simpson Park, located south of the community of Hemet. A fire starting at the east end of Simpson Park, in conjunction with Santa Ana wind conditions, has the potential to be a multi-million dollar loss fire.

Battalion 11 - Mountain

Station 23 – Pine Cove

The assets at risk in the Pine Cove/Idyllwild area include residences, business, and a significant number of camps, which are typically occupied by children throughout the summer. The potential problems faced in the communities include: difficult ingress and egress, potential for smoky conditions and limited

visibility coupled with narrow; winding roads, power lines throughout forested and residential areas, and steep rocky terrain.

Station 29 – Anza

The assets at risk in the Anza area are primarily the large number of homes scattered throughout the brush fields in the valley. All of the large public assets, such as the Trinity Boys Home property, propane storage facility, schools, and the community itself are well protected with large areas of defensible space.

With the predominately east wind influence present, any fire started within the brush fields to the south and east ends of the valley will have the potential for a large damaging fire due to the response times of both initial attack engines and extended attack engines. This with the scattered homes in these areas will cause a chance of property loss. The northern portion of the valley has large stands of brush Fuel models 4 and 6 that can be influenced by winds both east and west that can push fire through the areas up the south slopes of Thomas and Cahuilla Mts. to the USFS lands. This area all so has scattered homes through out the brush areas. There has been no real large fire history with the valley area in the past 12-15 years.

There has been a minor problem with PWF incidents and five fires started with suspicious causes in the past few years.

Station 30 – Pinyon

The major assets at risk located in the Pinyon area consist of scattered, residential single-family dwellings located. Also included is the BLM Santa Rosa National Monument

Station 53 – Garner Valley

The dead fuel from the last seven years of drought is still dead; the only difference is that with the heavy rains there is more grass to carry the fire. The brush that is not dead is showing heavy growth this year. On the positive side, the local cattle population is way up due to the Feds opening up some more grazing permits, so the cows are helping cut down on the grass

Station 77 – Lake Riverside

Aguanga is a rural community and within the last year a large increase in private dwellings has been noticed. Several senior trailer parks, an elementary school, casino, and a private extreme sports camp are located within its boundaries. San Bernardino national forest skirts the northern boundaries of Station 77's Primary Response Area.

Battalion 13 – Menifee

Battalion 13 is 42 square miles and has roughly the following boundaries: North of Murrieta city, South of Perris city, West of the Winchester area and just East of Elsinore (halfway down Railroad Canyon Road).

The area with the highest potential for large and damaging fires is in the area of Menifee, Station 68’s PRA. The primary housing construction in the area of

Cottonwood Canyon is single and doublewide mobile homes. The hazards include, but are not limited to: Limited access and egress, limited water supply, and housing construction.

The area south of Bundy Canyon Road may also pose a problem, however it is at least a north facing aspect. During north wind conditions, coupled with a wildland ignition, the potential exits for fire to rapidly spread south to Murrieta.

Battalion 15 – Temecula

Station 12 – Temecula

Major assets at risk in the Temecula area include the De Luz area (A major Avocado producing region) inter-mixed with very high dollar housing and the Santa Margarita river drainage, which runs from Temecula to the Pacific Ocean. Old Town Temecula is also at risk, due to prevalent westerly afternoon winds, which have pushed fire downhill into Temecula in the past. Another area is the Pala/Temecula Grade, where there is a very heavy brush load, and an active real estate market has generated large, high dollar homes in the area. Additionally, a community of homeless has set up a decent size encampment at the mouth of the Margarita drainage.

The potential is here as everywhere in the county for a large high dollar fire. If there were a start in the Santa Margarita drainage or the Pala/Temecula Grade, it would be difficult to achieve an initial attack success, due to fuels, topography, and accessibility.

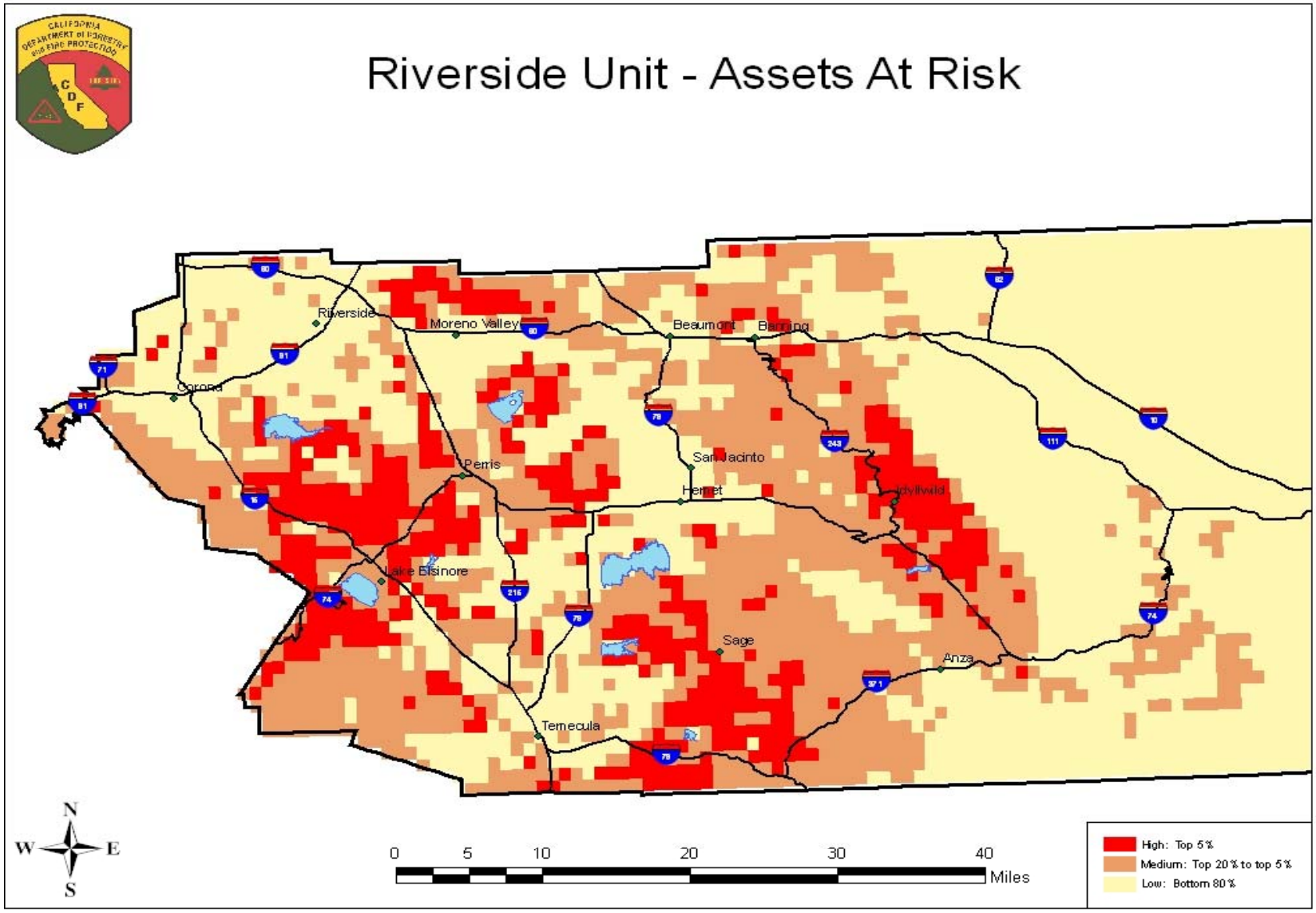
Station 75 – Bear Creek

The major assets risks within Station 75's Initial Attack area (SRA) include hundreds of residential structures with a minimum square footage of 4,000 feet up to a maximum of 12,000 square feet on five-acre parcels in the LaCresta and Tenaja area. This area is a significant watershed and environmental sensitive area. The 6,500-acre Santa Rosa Nature Conservancy contains over 10 miles of roads only accessible by Type III engines is also entirely within Station 75’s initial attack area. Recreational areas include Tenaja Falls and a portion of the Wildomar Off Highway Vehicle area on the Cleveland National Forest, both of which are located in the Initial Attack area. There are also numerous equestrian facilities and trails in the LaCresta area.

A significant potential for a large destructive wildfire exists within Station 75's area. This potential includes reasons listed above, a lack of any significant recorded fire history, and climatic conditions relating to the daily coastal influences. There are also several large communities with hundreds of significantly sized residences within the wildland urban interface and only two routes of ingress or egress in the event of an emergency. The general population frequently uses significant recreational areas and opportunities to access the National Forest areas. In the event of a wildfire there is a significant reflex time to augment required resources to affect evacuations and structure protection necessary in the area.

Station 92 – Wolf Creek

Major assets at risk within Station 92's first in area include hundreds of custom and ranch style residential structures with some equestrian activity. Accessibility and water supplies/sources to these residential structures is good. There are also two smaller and older style developments/communities, which have limited access and poor water supplies. As a general rule, access to the residential structures can be made by Type I engines, however access to the wildland is limited to Type III engines.


Riverside Unit - Assets At Risk
Riverside
Moreno Valley
Beaumont
Banning
Corona
Perris
San Jacinto
Hemet
Idyllwild
Lake Elsinore
Sage
Anza
Temecula
N
W
E
S
0
5
10
20
30
40
Miles
High: Top 5%
Medium: Top 20% to top 5%
Low: Bottom 80%

The Fire Situation

General Description

The primary ignition source for wildland fires in the Riverside Unit over the past ten years has been from equipment. In 2004, 37% of fires were equipment caused. The five-year average (2000-2004) shows equipment resulting in 30% of the fires, and the ten-year average (1995-2004) shows equipment as resulting in 28% of the fires. Riverside Unit further identified equipment caused fires into mowing, welding/grinding, and miscellaneous electrical, and miscellaneous equipment. Mowing does not appear to be a significant factor in ignitions, whereas miscellaneous electrical, welding/grinding, and miscellaneous equipment seem to be significant ignitions sources.

Excluding undetermined and miscellaneous ignitions sources, arson caused fires constitutes the next highest ignition source. In 2004 8% of the fires were arson caused, with a five-year average (2000-2004) of 10% and a ten-year average (1995-2004) of 9%.

Playing with fire was down in 2004 as well, at 5% of the fires in the unit. The five-year average (2000-2004) is 8% and the ten-year average (1995-2004) is 10%. This is in part due to the number of education programs and contacts Riverside Unit personnel make on a yearly basis.

Education

	Number of Programs	Number of Contacts
Schools	107	15020
Career Days	15	2000
Group	344	43599
Fairs	4	56540
Displays		
Parades		
Totals	470	117159

Hours	
VIP Coordinator	900
Other CDF	6418
VIP	0
Totals	7318

The following is a list of the significant wildland fires in Riverside Unit during 2004:

2004 Significant Fires

Name	RRU #	Cause	Acres
Cerrito	35517	Equipment	16,447
Citrus	58691	Equipment	682
Cottonwood	38418	Campfire	1,819
Eagle	35190	Equipment	8,945
Fish	36803	Equipment	63
Gafford	35197	Misc.	405
Lakeview	56039	Misc.	360
Melton	57236	Misc.	3,330
Morales	70756	Und	184
Pleasure	32913	Vehicle	2,456
School	35567	Misc.	359
Verbenia	55439	Equipment	3,138

The significant fires wildland fires in 2004 further reflect this, in that 42% of the significant fires were equipment caused. The majority of these significant fires occurred during the month of May, with June following in the next busiest month.

Riverside Unit Wildland Ignition Data

2004

Cause	Count	%
Undetermined	197	19%
Lightning	19	2%
Campfire	39	4%
Smoking	47	5%
Debris	24	2%
Arson	87	8%
Equipment	381	37%
Playing with Fire	53	5%
Misc.	149	14%
Vehicle	18	2%
Railroad	4	0%
Power line	23	2%
Total	1041	

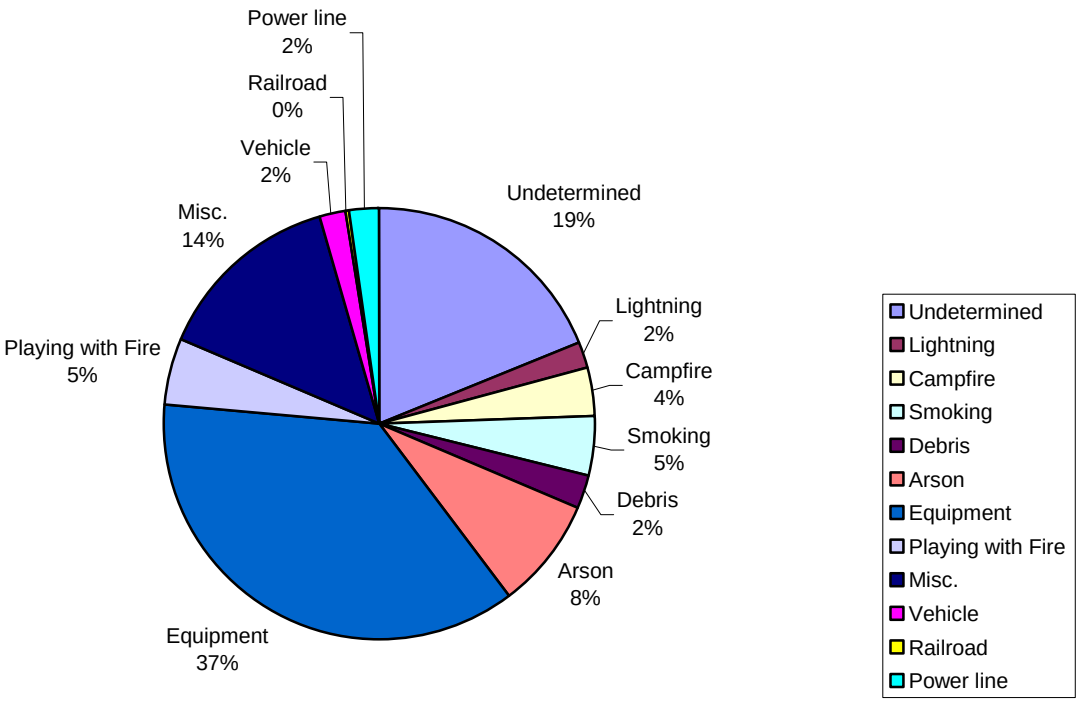
2000-2004

Cause	Count	%
Undetermined	871	17%
Lightning	72	1%
Campfire	186	4%
Smoking	331	6%
Debris	116	2%
Arson	508	10%
Equipment	1576	30%
Playing with Fire	429	8%
Misc.	811	16%
Vehicle	132	3%
Railroad	32	1%
Power line	118	2%
Total	5182	

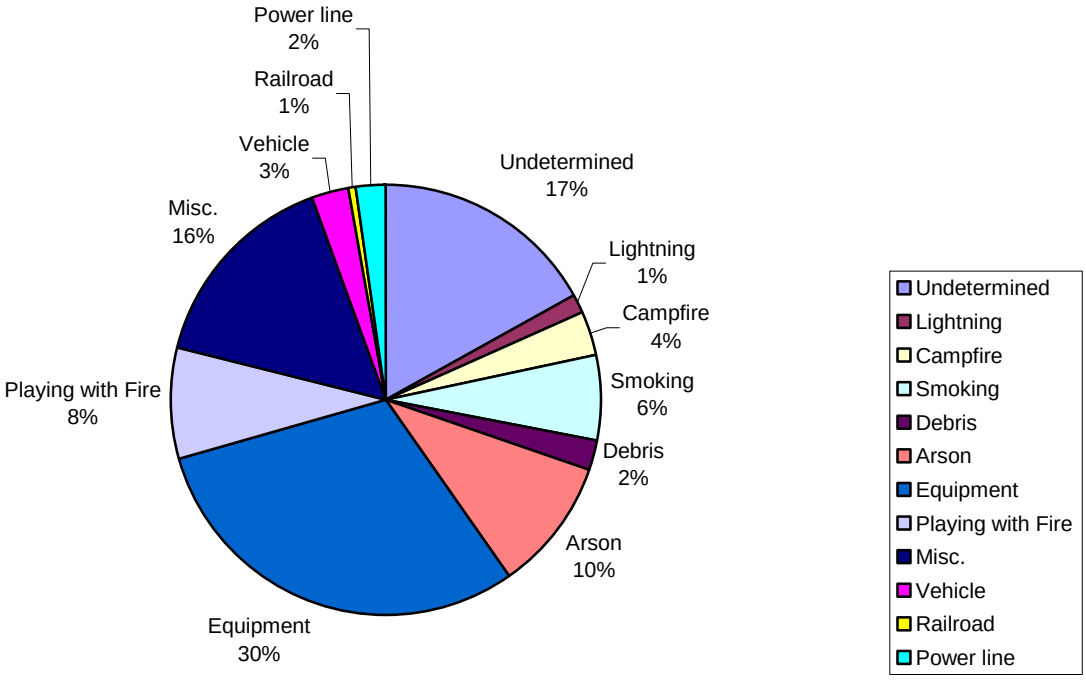
1995-2004

Cause	Count	%
Undetermined	2023	17%
Lightning	146	1%
Campfire	375	3%
Smoking	831	7%
Debris	297	3%
Arson	1066	9%
Equipment	3178	27%
Playing with Fire	1207	10%
Misc.	1939	17%
Vehicle	281	2%
Railroad	48	0%
Power line	341	3%
Total	11732	

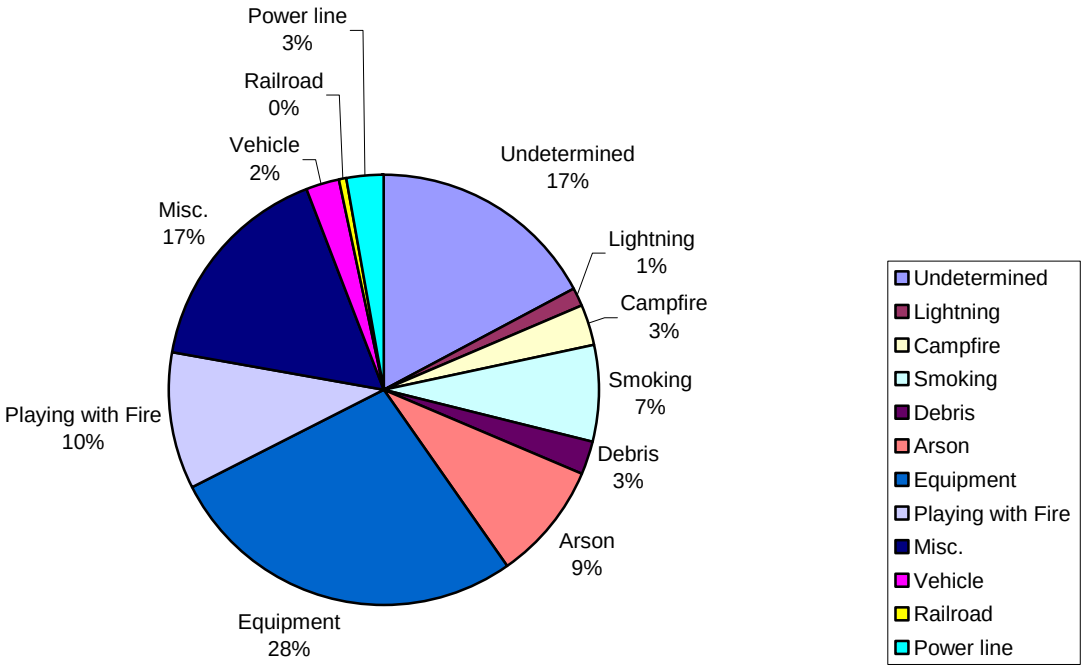
Riverside Unit - 2004 Wildland Ignitions



Riverside Unit - 2000-2004 Wildland Ignitions



Riverside Unit - 1995-2004 Wildland Ignitions



General Description of Desired Future Condition

San Jacinto Mountains – MAST Goals

1) Reforestation efforts will help restore species forest stand structure and composition back to un-evenagaged and mix conifer.
2) Reforestation efforts will aid preventing erosion and protect water quality.
3) Shaded fuelbreaks are a method of protecting communities from catastrophic fire by removing (Brush) ladder fuels and while retaining larger mature trees
4) Generally, Height growth is a function of tree genetics and site quality; while diameter growth is a function of stand stocking or number of trees per area.
5) Fire behavior is a function of fuel, weather and topography. The amount and type of fuel can be treated so that catastrophic fire is mitigated.
6) An overall goal of 40-80 Trees Per Acre (TPA) is recommended, and staff is currently working to educate the public on the concept of Basal Area/Acre as the preferred method for determining stocking standards.

Ignition Workload Assessment

Public Resources Code (PRC) Section 4130 sets for the following responsibilities for the Board of Forestry and CDF:

Directs the Board to classify all wildland within State Responsibility Area (SRA) based on cover, beneficial water uses, probable erosion damage and fire risks and hazards.

Determine the intensity of protection to be given to each type of wildland.

Prepare a Fire Plan to assure adequate statewide fire protection so that lands of each type can be assigned the same intensity of protection.

The ignition workload assessment will show how successful CDF has been in providing equal fire protection to similar lands. In addition, it will show where this goal is not being achieved and improvement is needed.

Fires are grouped into "success" and "failure" categories based on various factors. The assessment groups fires by general vegetation or fuel types (planning belts). Within the fuel type, fires are further classified based on final fire size and weather conditions at the time of ignition. Each fire is classified and labeled as either a successful initial attack or a failure.

Successes vs. failures by fuel types are attached. Riverside Unit shows very good initial attack success, for grass – 96%, brush – 91%, woodland – 94%, and conifer – 95%.

Ignitions Workload Analysis Matrix

Unit: RRU

Planning Belt: G (grass)

FIRE SIZE

FWI

	Spot	Small	Medium	Large	Escape
LOW	276	41	8	0	1
MEDIUM	124	25	8	4	2
HIGH	38	10	1	0	0
UNMATCHED	502	113	27	8	10

Planning Belt ID: G (grass) **Unit ID:** RRU Refresh Matrix

Success: 96 %

Fire Sizeclass Cutoffs for grass planning belt	FWI Index Intensity Cutoffs
Spot: Less than 1 acre(s)	Low: less than 15
Small: 1 - 10 acres	Medium: 15 - 30
Medium: 10 - 100 acres	High: greater than 30
Large: 100 - 500 acres	Unmatched: no weather observation available
Escape: greater than 500 acres	

Ignitions Workload Analysis Matrix

Unit: RRU

Planning Belt: B (brush)

FIRE SIZE

FWI

	Spot	Small	Medium	Large	Escape
LOW	759	60	53	29	53
MEDIUM	275	32	23	9	13
HIGH	60	4	5	6	6
UNMATCHED	794	94	63	22	40

Planning Belt ID: B (brush) **Unit ID:** RRU Refresh Matrix

Success: 91 %

Fire Sizeclass Cutoffs for brush planning belt	FWI Index Intensity Cutoffs
Spot: Less than 1 acre(s)	Low: less than 15
Small: 1 - 5 acres	Medium: 15 - 30
Medium: 5 - 25 acres	High: greater than 30
Large: 25 - 100 acres	Unmatched: no weather observation available
Escape: greater than 100 acres	

Ignitions Workload Analysis Matrix

Unit: RRU

Planning Belt: W (woodland)

FIRE SIZE

FWI

	Spot	Small	Medium	Large	Escape
LOW	269	41	7	7	4
MEDIUM	116	22	5	3	3
HIGH	31	3	4	1	1
UNMATCHED	451	86	25	7	17

Planning Belt ID: W (w oodland) **Unit ID:** RRU Refresh Matrix

Success: 94 %

Fire Sizeclass Cutoffs for woodland planning belt	FWI Index Intensity Cutoffs
Spot: Less than 1 acre(s)	Low: less than 15
Small: 1 - 10 acres	Medium: 15 - 30
Medium: 10 - 50 acres	High: greater than 30
Large: 50 - 200 acres	Unmatched: no weather observation available
Escape: greater than 200 acres	

Ignitions Workload Analysis Matrix

Unit: RRU

Planning Belt: I (interior conifer)

FIRE SIZE

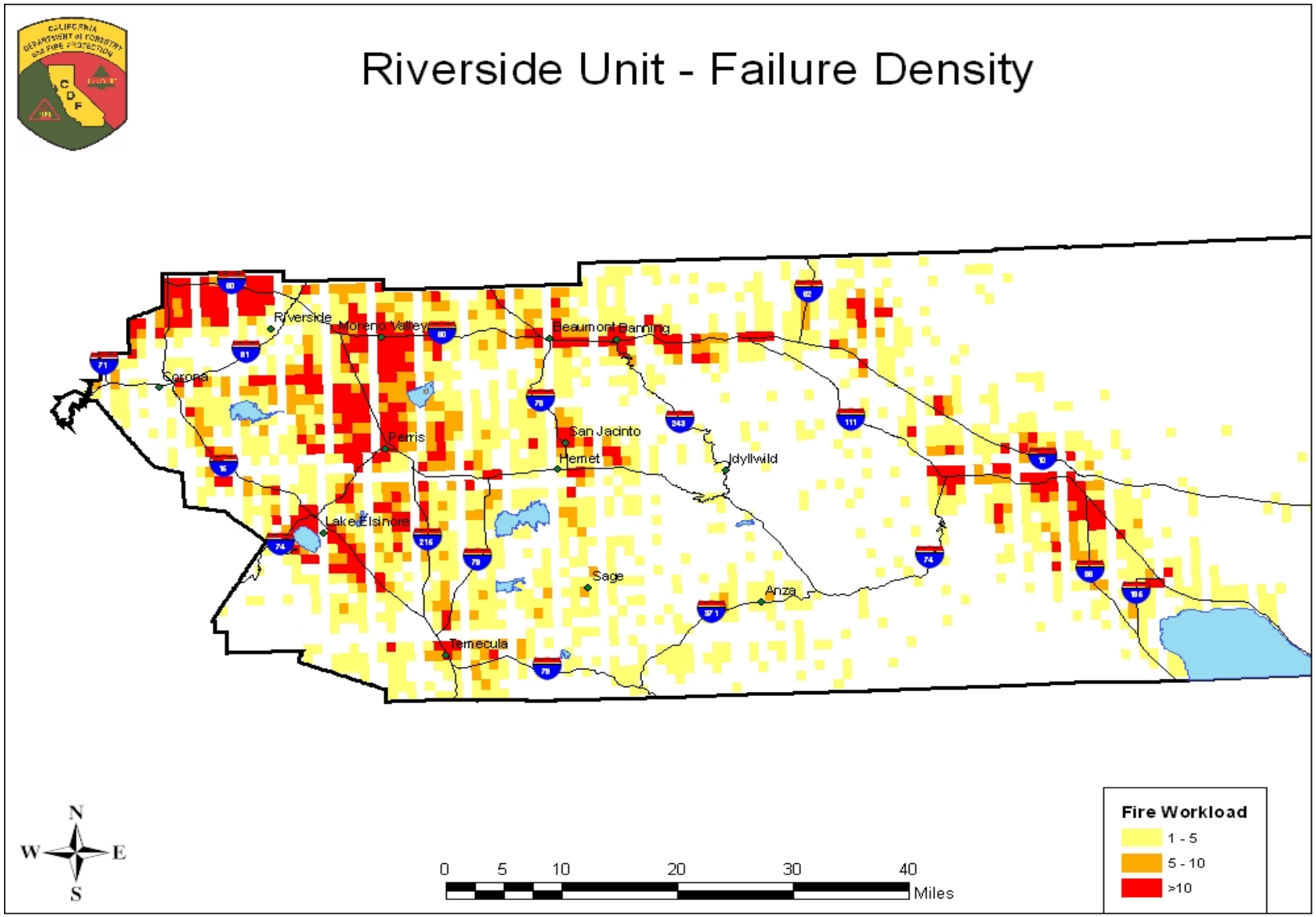
FWI

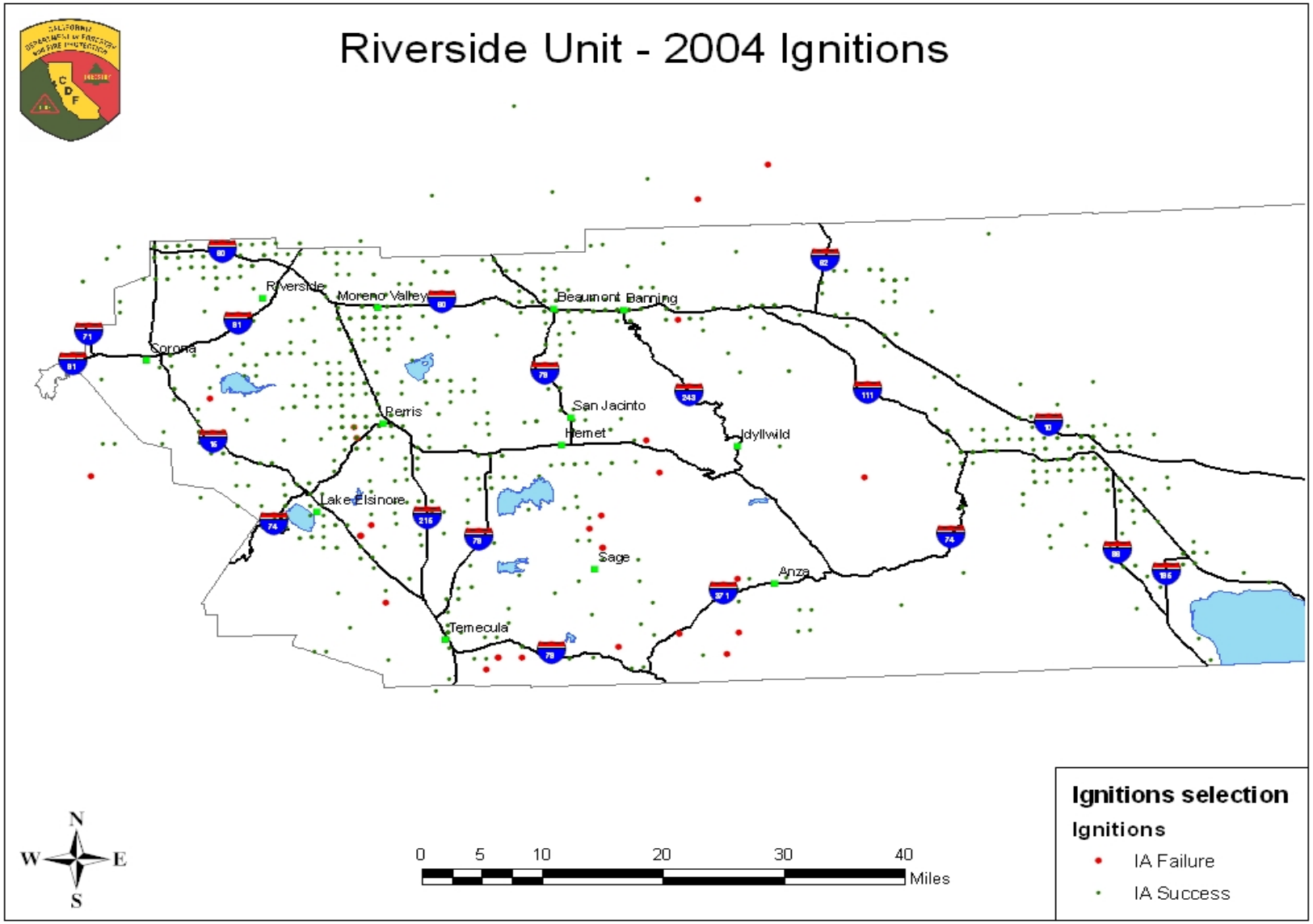
	Spot	Small	Medium	Large	Escape
LOW	107	3	0	1	0
MEDIUM	25	3	6	0	1
HIGH	5	0	0	0	0
UNMATCHED	97	3	8	2	2

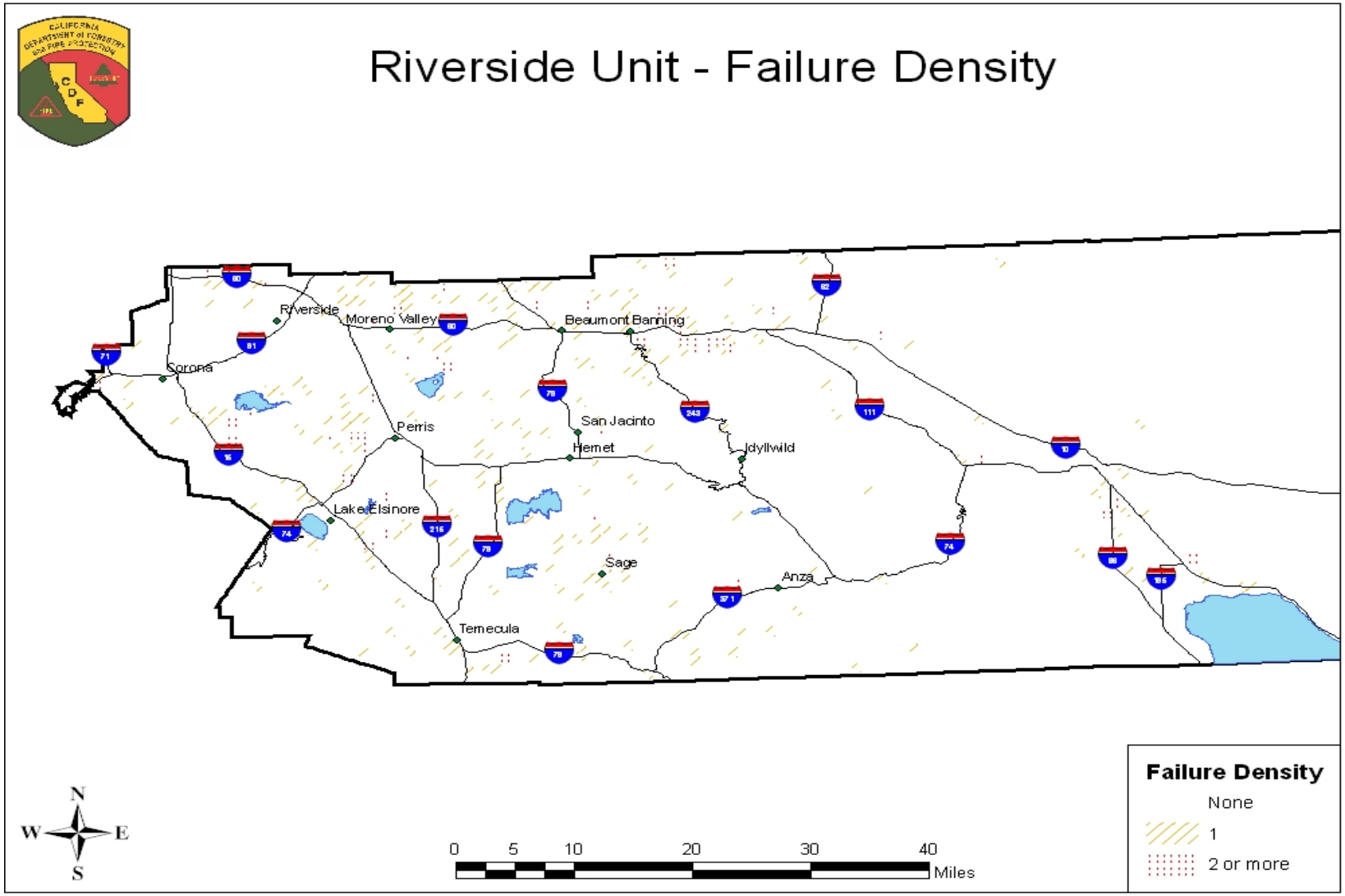
Planning Belt ID: I (interior conifer) **Unit ID:** RRU Refresh Matrix

Success: 95 %

Fire Sizeclass Cutoffs for interior conifer planning belt	FWI Index Intensity Cutoffs
Spot: Less than 1 acre(s)	Low: less than 15
Small: 1 - 2 acres	Medium: 15 - 30
Medium: 2 - 10 acres	High: greater than 30
Large: 10 - 100 acres	Unmatched: no weather observation available
Escape: greater than 100 acres	


Riverside Unit - Failure Density
Riverside
Moreno Valley
Beaumont-Banning
Corona
Perris
San Jacinto
Hemet
Idyllwild
Lake Elsinore
Sage
Anza
Temecula
N
W
E
S
0 5 10 20 30 40
Miles
Fire Workload
1 - 5
5 - 10
>10


Riverside Unit - 2004 Ignitions
Riverside
Moreno Valley
Beaumont
Banning
Corona
Perris
San Jacinto
Hemet
Idyllwild
Lake Elsinore
Sage
Anza
Temecula
N
W
E
S
0
5
10
20
30
40
Miles
Ignitions selection
Ignitions
IA Failure
IA Success


Riverside Unit - Failure Density
Riverside
Moreno Valley
Beaumont Banning
Corona
Perris
San Jacinto
Hemet
Idyllwild
Lake Elsinore
Sage
Anza
Temecula
N
W
E
S
0 5 10 20 30 40
Miles
Failure Density
None
1
2 or more

Vegetative Wildfire Fuels

Wildland fuels (live and dead vegetation) are a key component of fire behavior. The various fuels found in California have specific characteristics, which allow fire behavior analysts to categorize them based on how they burn. The Fire Behavior Prediction System (FBPS) was the method chosen for categorizing fuels for the fire plan process. This method classifies fuels into 13 different fuel models, each of which has specific physical and burning characteristics. The models include 3 grass, 4 brush, 3 timber and 3 slash fuel types. Custom fuel models have also been developed from these basic models to take into account the variations found in desert areas and wildland areas with an urban component.

The fuel models are used to label current and historic fuels. Historic fuels, those fuels that existed prior to a significant wildfire or VMP burn, are important because they tell us what the climax vegetation and fuel type will be for a particular area. The historic fuel models are used to label the Unit's planning belts in the fire plan.

Current fuel models are used along with slope class, ladder fuel component, crown closure, and difficulty of control rating to derive the fuel hazard rank for each quad 81st. It has been determined that in California no wildland fuel can be considered to have a low hazard rating, so the adjective descriptions only include medium, high or very high.

In Riverside County, as well as San Bernardino and San Diego, we have seen dramatic and historic changes in our montane chaparral and timber fuel types in just the last year. The record-breaking drought has killed huge stands of timber and brush over tens of thousands of acres in our mountains. It has become the number one fuel problem for our County. Mortality mapping is constantly being updated cooperatively through the MAST using GIS technology.

Battalion 1 – Perris

Generally Battalion 1 consists of a light grass in the populated areas on the west and east sides of the Battalion. The medium fuels are in some of the same areas, but in the more sparsely populated areas, such as Santa Rosa Mine Road and Juniper Flats.

Battalion 2 – Lake Elsinore

The Battalion 2 area primarily consists of light brush and heavy grass throughout the area. Due to the frequent fire history in the area, these areas are maintaining the light brush and heavy grasses. The Ortega front country, in the Trabuco Ranger District consists primarily of a medium to heavy brush, which is one of the more volatile areas of Riverside Unit.

Battalion 3 – Beaumont

The fuels in Battalion 3 are widely varied, ranging from grass, coastal sage scrub, chamise, Russian Thistle to scrub oaks. In the area north of Cherry Valley, manzanita is the predominate fuel. The heavy rains this past winter contributed to a significant grass crop throughout the Battalion.

Battalion 4 – Corona

In the Santa Ana River bottom there is a continual bed of fuels just east of the Van Buren Boulevard bridge in Pedley extending west to Highway 71 along the county line. The river bottom fuel load is made up of annual grasses, bamboo, various brush species and various types of trees.

In the Chino Hills area annual grasses are abundant, with small patches of brush and a few oak/sycamore trees in the canyon areas.

In the Dawson Canyon and Spanish Hills area the fuels are annual grasses and light brush. These hills have been burned numerous times over many years, with the exception of a few canyons. Because of the light fuel load, the large fires in this area have been predominantly wind driven.

In the foothills that run along the Cleveland National Forest the fuels are generally light grasses with heavy brush.

Battalion 5 – San Jacinto

The fuels in Battalion 5 below 2000' in elevation mostly consist of grasses and coastal sage scrub (Fuel Model 2). Above 2000' in elevation the fuel type is dependent on the length of time since last fire, i.e. less than 20 years ago - grass and medium brush (Fuel Model 6), greater than 20 years ago - heavier mixed brush (Fuel Model 4).

Battalion 11 – Mountain

Station 23 – Pine Cove

The fuels in the Pine Cove/Idyllwild area are composed of mature chaparral with a mixed conifer forest overstory. The predominant understory species include manzanita, chaparral whitethorn, deer brush and chamise. The tree over story consists of mixed stands of Jeffery Pine, Ponderosa Pine, Coulter Pine, Incense Cedar, White Fire and Sugar Pine. There is no recorded fire history for the area since fire records started being kept around 1924; therefore it is assumed the vegetative community is at least 75 years old.

Station 29 – Anza

The fuel types in the Anza area consist of approximately 25% fuel model 1 mostly located on the valley floor on the Cahuilla Indian Reservation and along the Cooper Cienaga Truck trail to the south. Fuel model 4 is approximately 30%, inter-mixed in areas through the valley. Fuel model 6 is approximately 45%, consisting of

larger stands of manzanita and red shank with plant height as high as 10-15 feet on average.

Overall, the area has a grass under story, which is 12-18" in height. The grass is also matted down, which adds to the fuel loads. The red shank is showing new stringy bark, which adds to the ladder fuels in the brush fields.

Station 30 – Pinyon

The fuels in the Pinyon area consist of Fuel Models 4 and 6, with patches of Fuel Model 1 located throughout.

Station 53 – Garner Valley

The dead fuel from the last seven years of drought is still dead, the only difference is with the amount of rainfall this winter there is a significant grass crop to carry a potential fire. The brush that is not dead is showing heavy growth this year. On the positive side, the local cattle population is way up due to the Federal lands being opened up to more grazing permits, so the local cattle population is helping reduce the grass crop.

Station 77 – Lake Riverside

The Lake Riverside area is located near Aguanga. The fuels near Highway 79 and Highway 371 consist of grass (Fuel Model 3) and progressing northeast on Highway 371 the fuels change into fuel model 4.

Battalion 13 - Menifee

Battalion 13 is 42 square miles and has roughly the following boundaries: North of Murrieta city, South of Perris city, West of the Winchester area and just East of Elsinore (halfway down Railroad Canyon Road). The fuels consist of light native California vegetation, i.e. brush. The area is surrounded and interspersed with a healthy grass crop that has already “turned”.

Battalion 15 – Temecula

Station 12 – Temecula

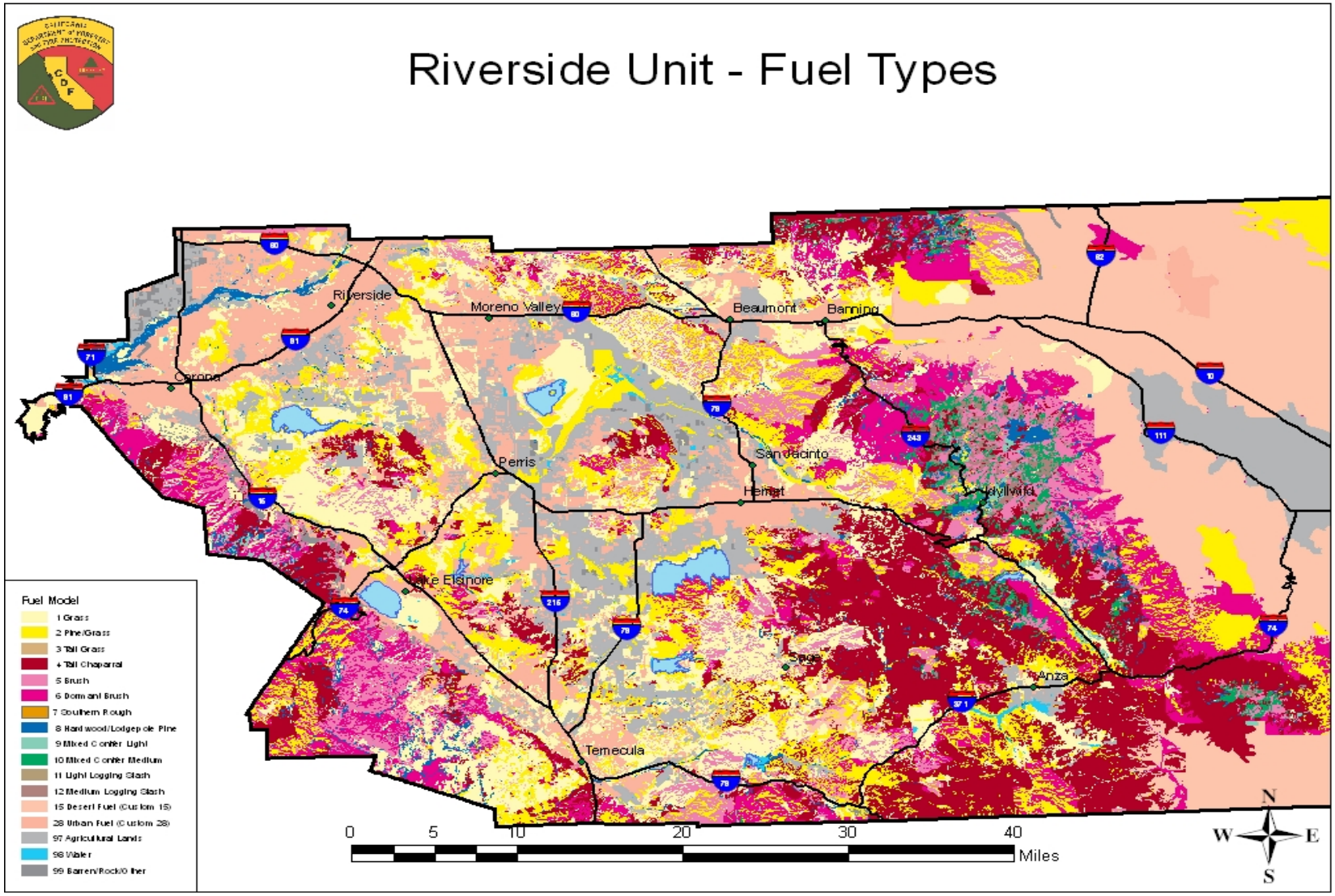
The fuels in the Temecula area include annual grasses (Fuel Models 1 and 3) and brush species chamise, sage, buckwheat (Fuel Models 4,5 and 6).

Station 75 – Bear Creek

Within the SRA of Station 75's IA there are Fuel Models 1 and 3 (Short and tall annual grasses) along with Fuel Models 4, 5, and 6 (Chaparral and dormant brush including chamise and coastal sage).

Station 92 – Wolf Creek

Station 92’s fuels are generally made up of annual grass (Almost all of which are located in last year’s fire areas) and chaparral, dormant brush including chamise and coastal sage.


Riverside Unit - Fuel Types
Riverside
Moreno Valley
Beaumont
Banning
Corona
Perris
San Jacinto
Hemet
Idyllwild
Lake Elsinore
Temecula
Anza
Fuel Model
1 Grass
2 Pine/Grass
3 Tall Grass
4 Tall Chaparral
5 Brush
6 Dormant Brush
7 Southern Rough
8 Hardwood/Lodgepole Pine
9 Mixed Conifer Light
10 Mixed Conifer Medium
11 Light Logging Slash
12 Medium Logging Slash
15 Desert Fuel (Custom 15)
28 Urban Fuel (Custom 28)
97 Agricultural Lands
98 Water
99 Barren/Rock/Other
0 5 10 20 30 40
Miles
N
W
E
S

Structure Fuels

Defensible Space/Fire Safe Inspections

Riverside Unit is conducting Fire Safe Inspections utilizing the LE-38 program throughout the county. Unit Forestry staff have developed a database which allows the records of inspection to be stored electronically on the station computers. The LE-38 form contains a compilation of codes, from both the Public Resources Code and the Riverside County Ordinance 787.2, which adopts the Uniform Fire Code. This allows for the utilization of PRC 4291, and some more site specific regulation required by the County Ordinance.

As a part of the MAST Organization the private lands in the San Jacinto Mountains are being inspected by three different agencies, the California Department of Forestry and Fire Protection/Riverside County Fire, the United States Forest Service, and The Idyllwild Fire Protection District. Unit staff held a training day with all the agencies to go over to the changes associated with PRC 4291, and to ensure equal enforcement and interpretation of the laws across the area.

LE-38 SRA INSPECTIONS REPORT

Number of VIP Inspections	**0**
Number of CDF Inspections	**19276**
Number in Compliance	**16035**
Number of Violations	**3241**
Number Cited	**15**

Ordinances Regarding Construction

The Riverside Unit has adopted the 2000 Edition of the Uniform Fire Code, which specifies various requirements for the development of new construction within the County. The Planning and Engineering Department of the Riverside County Fire Department is responsible for ensuring new developments within the county meet the various ordinances pertaining to building homes in the wildland. These ordinances include PRC 4290, PRC 4291, Riverside County Ordinance 787.2, and the new Fire Marshal Building Standards.

Unit Staff are working with the local Fire Safe Councils to disseminate information and educate the public on the message of Firewise home construction practices. The LE-38 program at the station level provides for a one-on-one contact with residents. This is the opportunity for residents to discuss what they can do to ensure their homes survivability in the event of a catastrophic wildland fire.

Frequency of Severe Fire Weather

Fire behavior is dramatically influenced by weather conditions. Large costly fires are frequently, though not always, associated with severe fire weather conditions. Severe fire weather is typified by high temperatures, low humidity, and strong surface winds.

The Fire Plan's weather assessment considers different climates of California, from fog shrouded coastal plains to hot, dry interior valleys and deserts to cooler windy mountains. Each of these local climates experiences a different frequency of weather events that lead to severe fire behavior (severe fire weather).

The Fire Plan's weather assessment uses a Fire Weather Index (FWI) developed by USDA Forest Service researchers at the Riverside Fire Lab. This index combines air temperature, relative humidity, and wind speed into a single value index. This index can be calculated from hourly weather readings such as those collected in the Remote Automatic Weather Station (RAWS) data collection system. The FWI does not include fuel moistures, fuel models and only uses topography to the extent that RAWS station weather readings are influenced by local topography.

Weather assessment information will used to help analyze how changes in fire suppression forces will affect the Unit's level of service.

Vegetation Management Program Projects

Summary of the Vegetation Management Program

The Riverside Unit integrated its Vegetation Management and Pre-Fire Engineering Programs in January 1998 and created a Pre-fire Management Division. This integration has combined the planning and assessment tools developed for the 1995 California Fire Plan with the resources of the Vegetation Management Program (VMP) in order to implement fire hazard/fuels reduction projects in the most appropriate areas of Riverside County. The VMP Program has been used very successfully for fire hazard reduction in Riverside County since the program was first created. The use of fire weather, fire history, and fuels information provided through the Fire Plan provides a foundation to explain and justify to management and to the public why we are spending limited VMP resources and staff time in these high fire hazard areas.

The focus of VMP in Riverside County has historically been and will continue to be directed at fire hazard/fuels reduction and ecological restoration projects. The presence of numerous endangered species throughout Southern California has made burning for native habitat restoration a valuable tool. In most cases, these restoration burns also lend themselves to reduce fuel loads that pose a fire hazard to adjacent urban development. There is very little grazing activity in the county and therefore burning for range improvement has not been a priority.

Pre-fire staff are assisting several ecological reserves with the development of fire management plans that will involve fuels management as a component. Prescribed burning through the VMP Program will most likely be utilized for fire hazard reduction and ecological restoration on these properties when the plans are complete. Chipping is also a very appropriate tool that is used, particularly where there are smoke sensitive issues or where there is too great a threat to use prescribed fire.

Wildland Urban Interface (WUI) grants from the USDI Bureau of Land Management (BLM) and other grants are often required to help finance these critical projects. These grants are awarded on an annual basis and must meet the criteria set forth by the BLM

Past Projects

Lake Mathews VMP

The Management Plan for the Lake Mathews/Estelle Mountain Reserve specifies the use of prescribed fire to reduce or eliminate the non-native annual grasses and return the landscape to the native grass and sage scrub species. The vegetation within the Reserve is comprised primarily of non-native annual grassland, with smaller areas of mixed chaparral, Riversidian sage scrub, and California juniper woodland. Ultimately, VMP plans will be developed to implement prescribed fire on the 6,478 acres within the northern half of the Reserve. The area has been divided into forty-three (43) prescribed fire units that will be burned on a rotational basis that best mimics the natural fire cycle.

Three units totaling 500 acres were scheduled for burning during the spring of 2002. However, numerous lawsuits prevented any work from occurring on that project. It is currently suspended pending a resolution of those legal issues.

In spring 2003, Metropolitan Water District of Southern California (MWD) approached CDF about conducting VMP on lands owned by MWDF in the Lake Mathews Project area. We are currently working with the MWD environmental consultant in pursuing the identification of specific project units in order to proceed with environmental review.

Lake Perris VMP

Lake Perris State Recreation Area is located in western Riverside County about 18 miles southeast of the city of Riverside. The project area is located at between 1600 and 1700 feet in elevation in the basin northeast of the lake. Lake Perris has approximately 2000 acres of habitat that is grassland. These grassland areas were highly disturbed in the past by grazing and agriculture and are currently dominated by non-native plants. The predominant plants are European annual grasses and mustards including Wild oats (*Avena* spp.), Bromes (*Bromus* spp.) and mustards (*Brassica* spp.). Also present, but less dominant are annual forbs including filaree (*Erodium* spp.).

The project implements prescribed fire within the Lake Perris State Recreation Area for the purpose of habitat restoration. This is part of a long-term management plan to restore fire to the LPSRA at intervals that mimic the natural fire cycle as closely as possible.

The specific objective of this project is to create conditions favorable to the Stephens' kangaroo rat (SKR) and other native wildlife species by removing European annual grasses and mustard and promoting the growth of low growing

annual forbs and selected native grasses. Complete consumption, > 90% is desired, with removal of the annual grasses and mustard as well as their seed and accumulated litter from the burn unit.

The current project area covers 618 acres divided into three (3) burn units. Two of the units, covering 454 acres, were burned in the spring of 1999. The remaining 133 acres were burned in 2001. The State Park continues to approach CDF for additional burning opportunities within the park.

Tenaja VMP

The Tenaja VMP project is located west of Murietta along the De Luz Creek drainage south of the intersection of Tenaja Road and Avenida La Cresta. The northern and eastern portion of the project is comprised mostly of large residentially zoned parcels. The central and southern project area is conservation and park land primarily covered with chaparral plants on the slopes and Engelmann Oak woodlands in the drainages.

The purpose of the Tenaja VMP is to reduce hazardous fuel loading in the upper De Luz Creek watershed. Historically, large fires initiating in the De Luz, Fallbrook, and Camp Pendleton areas have burned with the prevailing on shore winds and threatened the now developed areas on the Santa Rosa Plateau. This project is part of a larger plan to reduce the fuel loading adjacent to the plateau communities of Tenaja and La Cresta. Prescribed burning has taken place on the Santa Rosa Plateau Ecological Reserve immediately to the east since 1987 and additional projects are planned to the northwest on both state responsibility lands and the Cleveland National Forest within the next three years. Combined, these projects will provide a significant buffer against fires moving with the onshore prevailing winds from the south and west toward these now heavily developed communities.

Specifically, the Tenaja VMP will use prescribed fire to treat 364 acres of watershed in and adjacent to the De Luz Creek drainage. The northern end of the project will tie into Tenaja road and a newly constructed fuelbreak along the Rancho California Road easement. The west and east flanks will primarily utilize existing road systems with some new hand line construction. The southern end of the project area is steep with no existing roads and will therefore involve mostly construction of hand line. The interior vegetation will be burned in a mosaic pattern to develop age classes that are less likely to sustain major wildfires and enhance wildlife habitat.

The primary objectives of the prescribed burn project are to reduce fuel loading in the chaparral plant species and develop a mosaic of age and species diversified vegetative cover. An overall reduction in chaparral fuel loading of 50 to 80% is desired. Engelmann oak woodlands will not be treated and will be protected from adjacent burning operations.

Approximately 300 acres have been completed to date and as of 2003, the Tenaja project was incorporated into the Santa Rosa Plateau Reserve Project because the land involved was given to the Reserve. Additional acreage will be added to the remaining balance of 64 acres and it was slated for burning in fall 2003 or spring/summer 2004. Currently, the Tenaja project is held up in litigation. The project remains open, but with no foreseeable short-term resolution to the lawsuits.

Ronald McDonald House CFIP

The project is located in the north end of Garner Valley; Section 4, Township 6 south, Range 3 east, San Bernardino Base Meridian, Idyllwild quad. Pre-commercial thinning and pruning of 5 acres. Brush competing with the conifer stand will also be removed or thinned. The project is designed to reduce competition for water, nutrients and light concentrating biomass production on remaining trees and creating a healthier more vigorous forest. The project will also reduce fuel loading and reduce ladder fuels creating a more fire safe forest and wildland urban interface. In addition, a forest management plan has been prepared which the landowner may use now and in the future years to guide them in sound forest and land management practices which include fire safe considerations for both natural resources and developed portions of the land.

As of August 2003, a majority of the work has been completed. In addition to the initially targeted vegetation removal, dead trees resulting from the drought and bark beetles have also been removed. This has resulted in a property that has had its fuels sufficiently treated so that this camp has been identified as a “shelter in place” facility where members of the public or other camps can come to survive the passage of a fire if they are unable to evacuate off the mountain.

Current Projects

El Cariso and Decker Canyon Fuelbreaks

The project involves the improvement of a fuelbreak in the El Cariso/Decker canyon area located along Highway 74 west of Lake Elsinore. The location of these communities puts them at extreme risk from wild fires burning under coastal or Santa Ana wind conditions in predominantly chaparral fuels. This project has reduced the fire hazard by modifying the fire environment and giving fire protection agencies points of access to initiate defensive and offensive control strategies around the community.

The project is divided into the following components:

El Cariso Fuelbreak: Establish a 100' wide fuelbreak completely around El Cariso Village. A fuelbreak was originally constructed in 1990 on State Responsibility Lands north of Highway 74. This fuelbreak is being reconstructed with a new segment added south of Highway 74 in order to completely encircle the village. Cut material is being piled and burned or chipped on site. In June 2004, the El Cariso Fuelbreak was completed.

Decker Canyon Fuelbreak: Vegetation is scheduled to be thinned, pruned, and/or cleared within 50 feet of each side of the primary roads within Decker Canyon in order to improve access for fire equipment and escape routes for residents leaving the area. Cut material will be chipped and spread on site or piled and burned. Cooperators in this project include 19 private landowners, the Cleveland National Forest, the Orange County Fire Authority and the Riverside Unit of CDF. This project is still pending, with discussion among local VMP coordinators regarding the use of goats on the projects.

Lake Mathews/Estelle Mountain Core Reserve

The Lake Mathews/Estelle Mountain (LMEM) Core Reserve is located in western Riverside County and is currently 11,232 acres in size. The Reserve's current configuration and management structure has its origins in a 1996 Habitat Conservation Plan (HCP) for the Stephen's kangaroo rat. The Reserve Management Committee (RMC) is comprised of representatives from the U.S Fish and Wildlife Service, the California Department of Fish and Game, the Bureau of Land Management, The Metropolitan Water District of Southern California, the Riverside County Habitat Conservation Agency, and the Center for Natural Lands Management.

The 1993 fire management plan serves as a foundation and model to expand the planning effort into the LMEM Core Reserve. In May 1998, the RMC initiated the

expanded fire management planning effort in cooperation with the California Department of Forestry and Fire Protection. The expanded plan, completed in the spring of 1999, addresses pre-fire fuels management and fire suppression planning issues as they relate to the protection of public safety and endangered species habitat management.

Pre-fire management projects will focus on the implementation of prescribed fire on 6,478 acres within the northern half of the reserve. The area has been divided into forty-three (43) prescribed fire units that will be burned on a rotational basis that best mimics the natural fire cycle. Pre-fire management efforts in this area will focus on fuelbreaks, weed abatement and focused fire prevention activities aimed at keeping fire out of the area in order to facilitate regeneration of native species. In 2004 prescribed fire had been utilized on 1,006 acres in the reserve, and the plan remains open to continue the rotation of burning the prescribed fire units.

Mount Baldy

The Mount Baldy VMP is an emergency fuels reduction project that will be done cooperatively with the San Bernardino National Forest. This 272-acre project represents a critical piece of ground that is the last remaining link tying the former West Ridge II VMP project with the 1999 Mixing Fire. Without treating these fuels, which include large acreages of dead chaparral resulting from the drought, a fire starting along State Highway 74 in the Dry Creek area would be able to sweep uphill to threaten Mountain Center and Baldy Mountain Village. Although only 75 acres of SRA would be treated in this co-op project, these acres are critical to the project due to topography. Three-quarters of this project was completed in Fall 2003, and the remaining one-quarter is scheduled for Spring 2005.

Poppet Flats Fuelbreak

The rural community of Poppet Flats is located at the northern end of the San Jacinto Mountains, approximately six miles south of Banning along Highway 243. Within the community there are over 400 private parcels, many of which contain occupied residences. The largest landowner is the Silent Valley Club, which is a 460-acre RV park housing 850 campsites and 1150 storage units. Lands managed by the San Bernardino National Forest, the Bureau of Land Management (BLM), and the Bureau of Indian Affairs surround most of the community. Access in and out is limited to Poppet Flats Road running out to Highway 243 on the east. Secondary access can be made to the southwest; however, it is unreliable due to locked gates at the Soboba Indian Reservation and lack of maintenance.

Poppet Flats sits in a southwest-facing valley, which ranges in elevation from 3200 to 4000 feet. Numerous fires have started on the Soboba Indian Reservation below Poppet Flats as well as recent arson fires along Highway 243 to the northeast. The physical orientation and location of the community places it at extreme risk from the normal southwest wind driven fire as well as the “Santa Ana” wind driven fire from

the east. Vegetation within and around the community is composed primarily of chaparral species such as chamise and manzanita, however, a significant cover of native California oak species is found along Poppet Creek. The age class of the vegetation varies since several large fires have burned in the area over the last three decades.

The intent of this proposed project is to implement a two-phase project that will provide a fuelbreak and truck trail completely around the Poppet Flats area. Phase one, completed July 2003 involved the construction of the fuelbreak and truck trail on private, National Forest, and BLM lands east of Poppet Flats Road. Phase two of the project will complete the construction of the fuelbreak north and west of the community.

The truck trail will be re-constructed to allow access for Type-3 engines and vegetation will be cleared to create a fuelbreak with an average width of 100 feet. Actual width will vary in order to create a feathered, mosaic appearance.

All cut material will be piled and burned or chipped. Vegetation Management Program (VMP) agreements have been initiated with private property owners to facilitate work and address environmental concerns on their lands.

In addition to the perimeter fuel modification, a community-chipping program will be established to facilitate the disposal of green waste generated by the property owners' annual weed/brush abatement activities. Chipping will be accomplished by CDF fire crews using a State-owned chipper housed at Oak Glen Conservation Camp.

Local residents within the community are very supportive of the proposed project. The Silent Valley Club, which is the largest private landowner within the project area, has committed their support through use of equipment and other resources. The San Bernardino National Forest and Bureau of Land Management are also committed to providing resources and support to the project.

As of August 2003, Phase I on the east side of Poppet Flats is complete. On July 25th, 2003, a 4,400-acre fire burned up to the east side of Poppet Flats. Firefighters were successful in keeping the fire out of Poppet Flats and the Silent Valley Club.

Phase II on the North and West side of the community is 2/3's complete, as of June 2004. Staff is currently working on property agreements on the remaining 1/3 of the project, with an expected Phase II completion by Spring 2005. The major issue regarding the completion of the Poppet Flats fuelbreak is obtaining signed RM-75's from various derelict properties. VMP staff is currently working with the Riverside County Assessors office to obtain the most recent APN information in an effort to complete the project.

Red Hill Fuelbreak

The unincorporated community of Pine Cove, located in the San Jacinto Mountains of Riverside County, has a population of approximately 1500 permanent residents on 2200 improved parcels. Pine Cove is situated predominately on a western/southwest aspect of the San Jacinto Mountain range at 6200' elevation and is "mid-slope" between the San Jacinto Valley to the west at 1700' in elevation and San Jacinto Peak at 10,804' in elevation to the east. Lands owned and protected by the U.S.D.A. Forest Service/San Bernardino National Forest surround the community of Pine Cove.

The vegetative community is comprised of mature chaparral with a mixed conifer forest over story. The predominant under story species include manzanita, chaparral whitethorn, deer brush and chamise. The tree over story consists of mixed stands of Jeffery Pine, Ponderosa Pine, Coulter Pine, Incense Cedar, White Fire and Sugar Pine. There is no recorded fire history for the area since fire records started being kept around 1924; therefore it is assumed the vegetative community is at least 75 years old.

In 1991, the California Department of Forestry and Fire Protection (CDF) entered into a Vegetation Management Program (VMP) Agreement with 34 private property owners on the western border of Pine Cove. The intent of the project was to reduce the fuel loading along the western perimeter of the community and to provide a "shaded fuelbreak" to protect the community from a potentially devastating slope driven wildland fire from the west. The CDF completed the project as defined in the 1991 Agreements in November 1997.

The Riverside Unit has re-entered into agreements with the current private property owners whose properties lie within the 1991 Red Hill Vegetation Management Program. In addition to maintaining the prescribed fuel loading levels completed during the 1991-1997 Program, it is proposed that CDF increases the treatment area within the same private properties to broaden the "shaded fuelbreak" and create a wider buffer of protection. The actual width of the treated area will vary depending on the type of vegetation and topography. The proposed fuel reduction project will be completed by piling dead vegetation, thinning brush and small trees with chainsaws and placing this material into small piles to be burned in cool weather. The net treatment area is approximately 251 acres.

This fuel reduction project is part of a larger plan to tie several fuel treatment projects together and thus provide a continuous fuel modification zone along the western edge of the San Jacinto Mountain communities

The proposed project has the potential of reducing the damages from wildland fires spreading into the community of Pine Cove. Fire history records indicate that fires in the surrounding area are traditionally slope and wind driven, burning in an easterly

direction. The only exceptions to this historical data are those fires that are wind driven during a “Santa Ana” wind event.

The proposed project is intended to provide a buffer of protection to the community of Pine Cove by reducing fuel-loading levels and to provide an area to which fire suppression forces can safely take action on an encroaching fire.

The original 1991 Red Hill Vegetation Management Project was supported by the Idyllwild/Pine Cove Coordinated Resource Management Planning Group (CRMP) and by the Pine Cove Property Owners Association. The project was also well supported by the participating property owners. In addition, the 1991 Red Hill Vegetation Management Project was conducted in conjunction with the U.S.D.A. Forest Service/San Bernardino National Forest fuelbreak project that “linked” federal lands that separated the private property parcels of the original project.

Since this project was initially envisioned in the 2000 RRU Fire Plan, the massive tree mortality and resulting State emergency declaration for the area have occurred. Thousands of trees have died within the project area. Therefore, CDF is reentering the same project area on multiple occasions, as more trees die and future treatment will be required for several years to come. The current VMP contract has been renewed and expires in October 2006. Insect control crews from Bautista and Oak Glen camp as well as regular grade crews are working on this massive fuel reduction project. CDF special augmentation engines are assisting with the project also, which keeps additional firefighting resources in close proximity to the potential disaster that could occur in the area.

Southwest Riverside County Multi-Species Reserve/Johnson Ranch

The Southwest Riverside County Multi-species Reserve incorporates approximately 15,000 acres in southwest Riverside County around Lake Skinner and north to the Diamond Valley Lake. The reserve is a composite of ownerships comprised of the Metropolitan Water District, Riverside County Regional Park and Open Space District, and the Riverside County Habitat Conservation Agency. The reserve was established to enhance and protect endangered species habitat and protect the watersheds surrounding Lake Skinner and Diamond Valley Lake. A committee, comprised of a representative from each of the landowners as well as the U.S. Fish and Wildlife Service and the California Department of Fish and Game, is responsible for management decisions on the reserve lands.

A draft fire management plan was initiated in August 1997 by the Metropolitan Water District in cooperation with the Reserve Management Committee and the California Department of Forestry and Fire Protection. The final plan was completed in 2003 and will result in the initiation of prescribed fire and other fuels management projects.

During 2004 approximately 550 acres were burned, with approximately 600 acres scheduled to be treated in 2005.

The Santa Margarita River Management Area

The Santa Margarita River Management Area (SMRMA) is a joint project of the Fallbrook Public Utility District, Mission Resource Conservation District and San Diego State University. It is funded through grants from the Federal Emergency Management Agency (FEMA) and CDF. It consists of two properties, the Santa Margarita Ecological Reserve (SMER) and the Fallbrook Public Utility District (FPUD). The SMER property is a Biological Field Station for SDSU and the FPUD property was acquired for a dam that was never built. See attached Reserve management area map.

SMRMA covers approximately 5,480 acres of land straddling the Riverside / San Diego County Line west of Interstate 15. It follows the Santa Margarita River Drainage south of Temecula. More than three-quarters of the area lies within Riverside County. The topography is largely steep hilly terrain bisected by a deep river gorge. It is mostly covered by various types of chaparral, coastal sage scrub, oak woodland forest and cottonwood-willow riparian areas. Although located in very high fire hazard area, most of the property has not burned for more than 25 years. The entire SMRMA area is habitat for a number of rare and endangered plant and animal species. It is surrounded by rural residential and light agricultural use property. Most of the agriculture consists of avocado and citrus groves.

The area is mostly CDF Direct Protection Area and CDF has been working in an advisory capacity with SDSU in the preparation of a Pre-Fire Management Plan. A draft plan has been developed which will incorporate the elements of ignition risk reduction, infrastructure improvements, fire defense improvements, vegetation management through prescribed burning and a pre-fire suppression plan. Elements of each are described below.

Ignition risk reduction:

- Additional gates, fencing and sign posting.
- Increased patrol by the U.S. Border Patrol and Sheriff's Deputies to reduce trespass.
- A Neighborhood Watch Program in adjacent residential properties.
- Smoking and fire suppression equipment restrictions on persons and vehicles entering SMRMA on official business.

Infrastructure Improvements:

- Re-grading and improving roads and trails within and accessing SMRMA.
- Road signage as appropriate.
- Fire Safety Zone / Staging areas for fire suppression personnel and equipment.

Fire defense Improvements:

- Creation of a fuelbreak along the California Aqueduct Road at least 100' in width. This fuelbreak will bisect SMRMA along a north-south axis.
- Real-time access to weather information from an on-site station.

Vegetation Management:

- Prescribed burning in the chaparral fuels to create an age-class mosaic that reduces fuels and enhances habitat.

Pre-Fire Suppression Plan:

- Develop a plan by mutual agreement for distribution to fire suppression agencies having jurisdiction that addresses fire suppression tactical necessities while minimizing the impacts of those activities upon the environment.

Status: Project is still in planning stages. A draft Wild Fire Management Plan has been prepared by SDSU for review. Some of the ignition risk reduction measures that do not involve ground disturbance have been implemented.

Santa Rosa Plateau Ecological Reserve VMP

The project involves prescribed burning on the Santa Rosa Plateau Ecological Reserve, which is located immediately west of Murrieta in the eastern foothills of the Santa Ana Mountain Range. A VMP plan was first developed for the Reserve in the mid-1980's and subsequent burn plans have been in place ever since. There are 4,230 acres covered under the current agreement.

Prescribed fire was introduced onto the reserve primarily to simulate natural fire cycles and characteristics that support native vegetation communities historically present in the area. The reserve is divided into numerous burn units that are randomly selected for burning each year. On average fire is returned to the same unit approximately every five to seven years with between 500 and 1500 acres being treated annually. In addition to the ecological benefits, these recurring cycles of fire generate plant communities with less dangerous wild fire behavior characteristics. They also develop vegetative age classes that will be less likely to create or sustain major wild fires.

Fuels are primarily annual grasses with oak woodland cover; however, chaparral is present in all or portions of several units. Project preparation work involves cutting of hand line and road maintenance to facilitate access and control lines. Burning is typically carried out using drip torches and aerial ignition devices.

Management of the reserve has changed, and is now the responsibility of The California Department of Fish and Game, under the direction of a management committee. Ownership is comprised of The California Department of Fish and Game, The Nature Conservancy, the Riverside County Regional Park and Open Space District. The new agreement with the Department of Fish and Game took effect in February 2004.

In June of 2003, 558 acres of this project were successfully burned and as of June 2004, a total of 1,130 acres have been burned.

California Forest Practice Act – Exemptions and Emergency Notices

There are numerous Timber Harvest Plan (THP) exemptions and emergency notices in effect that are resulting in thousands of trees being removed with 100% slash cleanup in most cases. This activity will have an enormous impact on reducing the staggering amount of fuel that has resulted from the drought and bark beetle outbreak. CDF Foresters have been busy conducting Forest Practice inspections on the timber operations occurring on private land.

The governor's emergency proclamation temporarily lifted the requirement for filing exemptions and notices with the State. However, all other provisions of the Forest Practice Act and Rules are in affect. It is estimated that tens of thousands of trees have been removed off of SRA lands in the last year by Licensed Timber Operators and tree service contractors and that thousands more trees need to be removed.

Along power line rights of way CDF foresters are working closely with Southern California Edison (SCE)-hired foresters and line clearing crews to ensure compliance with the forest practice rules. We are also working with government crews that are removing trees along state highways and county roads for the same purpose.

As part of the VMP program and the San Jacinto Zone of Infestation authorized insect control program, CDF conservation camp crews are also removing thousands of trees in compliance with the forest practice rules.